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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,434	06/19/2001	William J. Benett	IL-10473	4213

7590

06/17/2002

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EXAMINER

MANDALA, VICTOR A

ART UNIT

PAPER NUMBER

2826

DATE MAILED: 06/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/885,434

Applicant(s)

BENETT ET AL.

Examiner

Victor A Mandala Jr.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: on Page 5 Paragraph 0020 Lines 5 & 6 #27 is being defined as a pin, which earlier in the Specification is was defined as an opening. It is assumed that the labeled pin #27 should be corrected to pin #35.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 & 15 recites the limitation "a connector for electrically connecting a chip and a conductive contact pin, comprising: the chip being comprised of..." in claims 1 & 15 Lines 1-2. There is insufficient antecedent basis for the chip and a conductive contact pin being claimed as part of the structure of the connector in the claim.

It is unclear to understand the design and various questions are brought up such as:

Is the connector part of the chip and directly attached to it?

Is the connector a device, which is a transition part between the chip and the PC Board and is only electrically connected to the chip, (a via)?

*Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,054,756 DiStefano et al.

3. Referring to claim 1, DiStefano et al. shows a connector for electrically connecting a chip and a conductive contact pin, comprising, (Figure 9): the chip being comprised of a non-conducting top layer, (#232), a non-conducting bottom layer, (#234), and a conductive sheet, (#266), situated in between the top layer, (#232), and the bottom layer, (#234); the chip including a passageway at least partially there through, (#240); and the passageway including means for holding the pin, (not shown Col. 15 Lines 28-31), in contact with the sheet, (#256), and for restraining the pin, (not shown Col. 15 Lines 28-31), from translating with respect to the chip.

DiStefano et al. does not disclose a pin, but mentions a lead in Col. 15 Lines 25-37, it is apparent that a pin can be inserted into Figure 9 #240 opening, there would be a frictional force applied onto the pin from the conductive sheet #256 and it's apposing conductive sheet #270 in the opening #240, so a normal force would have to be applied to exceed the frictional force in order for the pin to be inserted into the opening. The pin would still have an applied frictional force once stationary in the opening, which would allow electricity to flow through the junction into the electrical element.

It would be obvious to one skilled in the art to use the teachings of DiStefano et als' lead and understand it can be used as a pin.

4. Referring to claim 15, DiStefano et al. shows a connector for electrically connecting a chip and a conductive contact pin, comprising, (Figure 9): the chip including a non-conducting top layer, (#232), a non-conducting bottom layer, (#234), and an electrical element; a conductive sheet, (#266), situated in between the top layer, (#232), and the bottom layer, (#234), and being electrically connected to the element; the top layer, (#232), having a top hole, (#240), there through, and the bottom layer, (#234), having a bottom hole, (#234), there through, with the top hole, (#240), and the bottom hole, (#240), being in alignment and comprising an aligned hole pair, (#240); the sheet, (#266), having an opening aligned with the aligned hole pair, (#240); and the opening including means for holding the pin in contact with the sheet, (#266), when the pin, (not shown Col. 15 Lines 28-31), is inserted into the opening, whereby the pin, (not shown Col. 15 Lines 28-31), is prevented from translating with respect to the chip and an electrical connection between the pin, (not shown Col. 15 Lines 28-31), and the element is established and maintained.

DiStefano et al. does not disclose a pin, but mentions a lead in Col. 15 Lines 25-37, it is apparent that a pin can be inserted into Figure 9 #240 opening, there would be a frictional force applied onto the pin from the conductive sheet #256 and it's apposing conductive sheet #270 in the opening #240, so a normal force would have to be applied to exceed the frictional force in order for the pin to be inserted into the opening. The pin would still have an applied frictional force once stationary in the opening, which would allow electricity to flow through the junction into the electrical element.

It would be obvious to one skilled in the art to use the teachings of DiStefano et als' lead and understand it can be used as a pin.

5. Referring to claim 18, the method for electrically connecting a chip and a conductive contact pin, comprising mechanically holding the pin in a passageway in the chip while establishing and maintaining an electrical connection between the pin and an electrical element embedded in the chip, (Col. 15 Lines 25-37).

DiStefano et al. does not disclose a pin, but mentions a lead in Col. 15 Lines 25-37, it is apparent that a pin can be inserted into Figure 9 #240 opening, there would be a frictional force applied onto the pin from the conductive sheet #256 and it's apposing conductive sheet #270 in the opening #240, so a normal force would have to be applied to exceed the frictional force in order for the pin to be inserted into the opening. The pin would still have an applied frictional force once stationary in the opening, which would allow electricity to flow through the junction into the electrical element.

It would be obvious to one skilled in the art to use the teachings of DiStefano et als' lead and understand it can be used as a pin.

6. Referring to claim 19, the connecting method wherein: mechanically holding the contact pin in the passageway is carried out by generating a frictional force acting on the pin, (Col. 15 Lines 25-37).

DiStefano et al. does not disclose a pin, but mentions a lead in Col. 15 Lines 25-37, it is apparent that if a pin was inserted into Figure 9 #240 opening there would be a frictional force applied onto the pin from the conductive sheet #256 and it's apposing conductive sheet #270 in the opening #240.

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It would be obvious to one skilled in the art to use the teachings of DiStefano et als' lead and understand it can be used as a pin.

7. Referring to claim 20, the connecting method wherein: generating the frictional force is carried out by applying a normal force against the pin, (Col. 15 Lines 25-37).

DiStefano et al. does not disclose a pin, but mentions a lead in Col. 15 Lines 25-37, it is apparent that if a pin was inserted into Figure 9 #240 opening there would be a frictional force applied onto the pin from the conductive sheet #256 and it's apposing conductive sheet #270 in the opening #240, so a normal force would have to be applied to exceed the frictional force in order for the pin to be inserted into the opening.

It would be obvious to one skilled in the art to use the teachings of DiStefano et als' lead and understand it can be used as a pin.

8. Referring to claim 21, the connecting method additionally providing the chip with a flexible conductive sheet, (#256), electrically connected to the electrical element and having an opening aligned with the passageway, wherein the electrical connection is maintained and the normal force is applied by inserting the pin into the opening and deforming the opening, (Col. 15 Lines 25-37).

DiStefano et al. does not disclose a pin, but mentions a lead in Col. 15 Lines 25-37, it is apparent that if a pin was inserted into Figure 9 #240 opening there would be a frictional force applied onto the pin from the conductive sheet #256 and it's apposing conductive sheet #270 in the opening #240, so a normal force would have to be applied to exceed the frictional force in order for the pin to be inserted into the opening. The pin would still have an applied frictional

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force once stationary in the opening, which would allow electricity to flow through the junction into the electrical element.

It would be obvious to one skilled in the art to use the teachings of DiStefano et als' lead and understand it can be used as a pin.

9. Referring to claim 22, the connecting method comprising: providing a plurality of passageways and openings; and attaching a plurality of the pins to a rigid harness and spatially arranging the pins so that each of the pins can be simultaneously inserted into one of the passageways and the opening aligned therewith, (Col. 15 Lines 25-37).

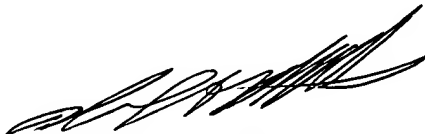
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor A Mandala Jr. whose telephone number is (703) 308-6560. The examiner can normally be reached on Monday through Thursday from 8am till 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (703) 308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

VAMJ  
June 13, 2002

  
ALEXANDER O. WILLIAMS  
PRIMARY EXAMINER  
